

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-032002	Application No. 10/777,503
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Joseph A. Zupanick	
		Filing Date February 11, 2004	Group Art Unit 3672

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
J	A1	4,889,186	12/26/1989	Hanson et al.			
	A2	5,676,207	10/14/1997	Simon et al.			
J	A3	2004/0140129 A1	07/22/2004	Gardes			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
J	B1	442,008	01/23/1936	United Kingdom			N/A	
	B2	444,484	03/17/1936	United Kingdom			N/A	
	B3	651,468	04/04/1951	United Kingdom			N/A	
	B4	893,869	04/18/1962	United Kingdom			N/A	
	B5	WO 97/21900	06/19/1997	WIPO			N/A	
J	B6	WO 2004/035984 A1	04/29/2004	WIPO			N/A	

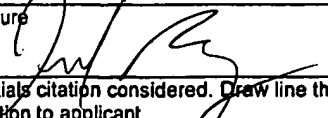
Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
J	C1	Dreiling, Tim, McClelland, M.L. and Bilyeu, Brad, "Horizontal & High Angle Air Drilling in the San Juan Basin, New Mexico," Believed to be dated April 1996, pp. 1-11
	C2	Zupanick, J., "Coalbed Methane Extraction," 28 th Mineral Law Conference, Lexington, Kentucky, October 16-17, 2003 (48 pages)
	C3	Zupanick, J., "CDX Gas - Pinnacle Project," Presentation at the 2002 Fall Meeting of North American Coal Bed Methane Forum, Morgantown, West Virginia, October 30, 2002 (23 pages)
	C4	Lukas, Andrew, Lucas Drilling Pty Ltd., "Technical Innovation and Engineering Xstrata - Oak Creek Coal Pty Limited," Presentation at Coal Seam Gas & Mine Methane Conference in Brisbane, November 22-23, 2004 (51 pages)
	C5	Field, Tony, Mitchell Drilling, "Let's Get Technical - Drilling Breakthroughs in Surface to In-Seam in Australia," Presentation at Coal Seam Gas & Mine Methane Conference in Brisbane, November 22-23, 2004 (20 pages)
	C6	Zupanick, Joseph A., "Coal Mine Methane Drainage Utilizing Multilateral Horizontal Wells," 2005 SME Annual Meeting & Exhibit, February 28 - March 2, 2005, Salt Lake City, Utah (6 pages)
J	C7	The Official Newsletter of the Cooperative Research Centre for Mining Technology and Equipment, CMTE News 7, "Tight-Radius Drilling Clinches Award," June 2001, 1 page
	C8	Listing of 174 References received from Third Party on February 16, 2005 (9 pages)

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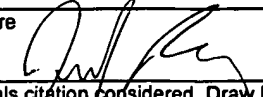
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B	C9	Gardes Directional Drilling, "Multiple Directional Wells From Single Borehole Developed," Reprinted from July 1989 edition of Offshore, Copyright 1989 by PennWell Publishing Company (4 pages)
	C10	"Economic Justification and Modeling of Multilateral Wells," Economic Analysis, Hart's Petroleum Engineer International, 1997 (4 pages)
	C11	Mike Chambers, "Multi-Lateral Completions at Mobil Past, Present, and Future," presented at the 1998 Summit on E&P Drilling Technologies, Strategic Research Institute, August 18-19, 1998 in San Antonio, Texas (26 pages)
	C12	David C. Oyler and William P. Diamond, "Drilling a Horizontal Coalbed Methane Drainage System From a Directional Surface Borehole," PB82221516, National Technical Information Service, Bureau of Mines, Pittsburgh, PA, Pittsburgh Research Center, April 1982 (56 pages)
	C13	P. Corlay, D. Bossie-Codreanu, J.C. Sabathier and E.R. Delamaide, "Improving Reservoir Management With Complex Well Architectures," Field Production & Reservoir Management, World Oil, January 1997 (5 pages)
	C14	Eric R. Skonberg and Hugh W. O'Donnell, "Horizontal Drilling for Underground Coal Gasification," presented at the Eighth Underground Coal Conversion Symposium, Keystone, Colorado, August 16, 1982 (8 pages)
	C15	Gamal Ismail, A.S. Fada'q, S. Kikuchi, H. El Khatib, "Ten Years Experience in Horizontal Application & Pushing the Limits of Well Construction Approach in Upper Zakum Field (Offshore Abu Dhabi)," SPE 87284, Society of Petroleum Engineers, October 2000 (17 pages)
	C16	Gamal Ismail, H. El-Khatib - ZADCO, Abu Dhabi, UAE, "Multi-Lateral Horizontal Drilling Problems & Solutions Experienced Offshore Abu Dhabi," SPE 36252, Society of Petroleum Engineers, October 1996 (12 pages)
	C17	C.M. Matthews and L.J. Dunn, "Drilling and Production Practices to Mitigate Sucker Rod/Tubing Wear-Related Failures in Directional Wells," SPE 22852, Society of Petroleum Engineers, October 1991 (12 pages)
	C18	H.H. Fields, Stephen Krickovic, Albert Sainato, and M.G. Zabetakis, "Degasification of Virgin Pittsburgh Coalbed Through a Large Borehole," RI-7800, Bureau of Mines Report of Investigations/1973, United States Department of the Interior, 1973 (31 pages)
	C19	William P. Diamond, "Methane Control for Underground Coal Mines," IC-9395, Bureau of Mines Information Circular, United States Department of the Interior, 1994 (51 pages)
	C20	Technology Scene Drilling & Intervention Services, "Weatherford Moves Into Advanced Multilateral Well Completion Technology" and "Productivity Gains and Safety Record Speed Acceptance of UBS," <i>Reservoir Mechanics</i> , Weatherford International, Inc., 2000 Annual Report (2 pages)
	C21	"A Different Direction for CBM Wells," <i>W Magazine</i> , 2004 Third Quarter (5 pages)
B	C22	Snyder, Robert E., "What's New in Production," <i>WorldOil Magazine</i> , February 2005, [printed from the internet on 3/7/2005], http://www.worldoil.com/magazine/MAGAZINE_DETAIL.asp?ART_ID=2507@MONTH_YEAR (3 pages)

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B	C23	Nazzal, Greg, "Moving Multilateral Systems to the Next Level, Strategic Acquisition Expands Weatherford's Capabilities," 2000 (2 pages)
	C24	Bahr, Angie, "Methane Draining Technology Boosts Safety and Energy Production," Energy Review, February 4, 2005, Website: www.energyreview.net/storyviewprint.asp, printed February 7, 2005 (2 pages)
	C25	Molvar, Erik M., "Drilling Smarter: Using Directional Drilling to Reduce Oil and Gas Impacts in the Intermountain West," Prepared by Biodiversity Conservation Alliance, Report issued February 18, 2003, 34 pages
	C26	King, Robert F., "Drilling Sideways – A Review of Horizontal Well Technology and Its Domestic Application," DOE/EIA-TR-0565, U.S. Department of Energy, April 1993, 30 pages
	C27	Santos, Helio, SPE, Impact Engineering Solutions and Jesus Olaya, Ecopetrol/ICP, "No-Damage Drilling: How to Achieve this Challenging Goal?," SPE 77189, Copyright 2002, presented at the IADC/SPE Asia Pacific Drilling Technology, Jakarta, Indonesia, 09/09-11/2002, 10 pages
	C28	Santos, Helio, SPE, Impact Engineering Solutions, "Increasing Leakoff Pressure with New Class of Drilling Fluid," SPE 78243, Copyright 2002, presented at the SPE/ISRM Rock Mechanics Conference in Irving, Texas, 10/20-23/2002, 7 pages
	C29	Franck Labenski, Paul Reid, SPE, and Helio Santos, SPE, Impact Solutions Group, "Drilling Fluids Approaches for Control of Wellbore Instability in Fractured Formations," SPE/IADC 85304, Society of Petroleum Engineers, Copyright 2003, presented at the SPE/IADC Middle East Drilling Technology Conference & Exhibition in Abu Dhabi, UAE, 10/20-22/2003, 8 pages
	C30	P. Reid, SPE, and H. Santos, SPE, Impact Solutions Group, "Novel Drilling, Completion and Workover Fluids for Depleted Zones: Avoiding Losses, Formation Damage and Stuck Pipe," SPE/IADC 85326, Society of Petroleum Engineers, Copyright 2003, presented at the SPE/IADC Middle East Drilling Conference & Exhibition in Abu Dhabi, UAE, 10/20-22/2003, 9 pages
	C31	Craig C. White and Adrian P. Chesters, NAM; Catalin D. Ivan, Sven Maikranz and Rob Nouris, M-I L.L.C., "Aphron-based drilling fluid: Novel technology for drilling depleted formations," WORLD OIL, Drilling Report Special Focus, October 2003, 5 pages
	C32	Robert E. Snyder, "Drilling Advances," WORLD OIL, October 2003, 1 page
	C33	U.S. Environmental Protection Agency, "Directional Drilling Technology," prepared for the EPA by Advanced Resources International under Contract 68-W-00-094, Coalbed Methane Outreach Program (CMOP), Website: http://search.epa.gov/s97is.vts, printed 3/17/2005, 13 pages
	C34	"Meridian Tests New Technology," Western Oil World, June 1990, Cover, Table of Contents and p. 13
	C35	Clint Leazer and Michael R. Marquez, "Short-Radius Drilling Expands Horizontal Well Applications," Petroleum Engineer International, April 1995, 6 pages
	C36	Terry R. Logan, "Horizontal Drainhole Drilling Techniques Used in Rocky Mountains Coal Seams," Geology and Coal-Bed Methane Resources of the Northern San Juan Basin, Colorado and New Mexico, Rocky Mountain Association of Geologists, Coal-Bed Methane, San Juan Basin, 1988, pp. cover, 133-142

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